

R E M A R K S

The non-elected withdrawn claims 4, 7-12, and 18-24 have not been cancelled; they are requested to be considered in the present application in event a generic claim is found allowable.

The second claim 23 and claims 24-26 have been renumbered as claims 24-27, respectively, as mentioned in the Office Action. Claims 1-3, 5, 6, 13-17 and 25-27 were rejected under 35 USC 112, second paragraph, as being indefinite for the reasons stated in the Office Action. The claims have been amended to meet this rejection following the Examiner's suggestions which are appreciated.

Claims 1, 3, 5, 14, 25 and 26 were rejected as fully met by Molari '375 on the grounds set forth in the Office Action. Claims 1, 13, 15, 16, 17 and 26 were rejected as fully met by Epple et al '464 for the reasons stated in the Office Action. Claim 2 was rejected as unpatentable over either Molari '375 or Epple et al '464 in view of Japanese publication 61261151 for the reasons stated in the Office Action. Claim 6 was rejected as unpatentable over Epple et al '446 in view of Keen et al '424 on the grounds set forth in the Office Action. Claim 27 was rejected as unpatentable over Epple et al '446 in view of Edwards '337 for the reasons stated in the Office Action.

The rejections are requested to be reconsidered in view of the following argument and the amendment herein.

The present invention as set forth in independent claims 1 and 25 provides spraying washing on the shields immediately upon movement of the washing arm from out of the basic (inoperative)

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rest position and the nozzles are positioned facing the shields in all positions of movement of the washing arm to spray washing water immediately on portions of the shields.

Molari ('375) is not relevant because Molari discloses a fluid motor (e.g. hydraulic motors 15, 25) and not an electric motor. The disadvantage of such a motor is the fluid. It takes a long time until water is sprayed on the shield. At first a necessary pressure must build up in the motor to move the washing arm. Only then is it possible to clean the shield. The present invention uses an electric motor (e.g. specification page 12, lines 15-16 and page 13, line 20). An electric motor is independent of the fluid pressure. For this reason the speed of response is essentially immediately and much higher than in Molari. The speed of response is an important factor for the safety of vehicles. Claim 1 has been amended to set forth that the motor is an electric motor.

Epplé et al ('464) disclose a flexible washing arm. The arm is moved from an inoperative basic position of Fig. 1 of Epplé et al to an operating spraying position (see Fig. 2 of Epplé et al). In this operating position of Fig. 2 water is sprayed on the shield/headlamp. With such a system it is impossible to clean any part of the shield/headlamp when the washing arm is being moved. Please refer to the present specification page 7, lines 5-8. That is the washing operation in Epplé et al only occurs after reaching the operating Fig. 2 position. During movement of the washing arm the nozzle does not spray but turns through a right angle so that the opening of the nozzle is turned toward the headlamp when the washing arm arrives in the operating position. There is only one position of spraying in Epplé et al, while the apparatus of the present invention can immediately spray washing

liquid upon and while moving from the basic position and can move while spraying.

In the present invention to the contrary of the teaching of Epple et al, the opening of the nozzle is always operational effectively facing the shield/headlamp so it can spray immediately upon movement of the washing arm. For this reason it is possible to clean the shield/headlamp during every movement of the washing arm. This is now set forth in independent claims 1 and 25.

Japanese publication 61261151 teaches a fluidic nozzle per se but not the other above-mentioned features of the present invention.

Keen and Edwards also do not teach the above-mentioned features of the present invention.

For these reasons the present invention is new and not obvious from Molari and Epple et al and the other cited references, considered alone or in combination.

In the event there are further issues remaining the Examiner is respectfully requested to telephone attorney to reach agreement to expedite issuance of this application.

Deposit Account Charge forms are presented for the Government fee of \$36.00 for presenting two extra total claims in excess of twenty claims.

Attached hereto is a marked-up version of the changes made to the claims by the current amendment. The attached pages are captioned "Version with markings to show changes made"

Since the present claims set forth the present invention patentably and distinctly, and are not taught by the cited art either taken alone or in combination, this amendment is now believed to place this case in condition for allowance and the Examiner is respectfully requested to reconsider the matter, enter this amendment, and to allow all of the claims in this case.

Respectfully submitted,

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CERTIFICATE OF MAILING UNDER 37 CFR SECTION 1.8(a)

I hereby certify that the accompanying Amendment is being deposited with the United States Postal Service as first class mail in an envelope addressed to: Commissioner of Patents & Trademarks, Washington, D.C. 20231, on August 10, 2001.

Dated: August 10, 2001

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USA National Stage Patent Application
PCT/EP97/05478 filed October 6, 1997
Joachim Bandemer, et al
Serial No.: 09/308,314
Filed: May 13, 1999
SHIELD CLEANING SYSTEM, OPERATING ...
Examiner: Gary K. Graham
Group art unit: 1744

VERSION WITH MARKINGS TO SHOW CHANGES MADE

IN THE CLAIMS

Please amend claims 1, 2, 6, 14, 16, 17, 25 and 27 as follows:

1. (twice amended) A shield cleaning system, operating solely by spraying with washing fluid, for shields of an automobile, [in particular for shields of automobile lights, with] comprising

an electric motor,

a washing arm movable over and at a distance from the shield by [a] said electric motor, and [with]

a washing nozzle [which is] arranged on the washing arm [and which is provided] for spraying washing fluid onto the shield, wherein the washing nozzle (12-14, 25, 38, 50, 54, 63) is formed for spraying a part region of the shield (2, 34, 49, 55, 65) and [can be moved] is movable by the washing arm (6, 37, 48, 53) over [that] a region of the shield (2, 34, 49, 55, 65) which is to be cleaned, wherein the washing nozzle has an outlet opening facing said shield in and defining all spraying positions of the nozzle and that of the washing arm immediately during movement of the washing arm from a basic position, and the washing nozzle is sprayable on at least portions of the shield immediately during all of said movement of the washing arm.

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2. (amended) The shield cleaning system as claimed in claim 1, wherein the washing nozzle (12-14, 25, 38, 50, 54, 63) is [designed as] a fluidic nozzle with a washing fluid jet oscillating essentially transversely to the direction of movement of the washing arm (6, 37, 48, 53).

6. (twice amended) The shield cleaning system as claimed in claim 3, wherein a heating element comprising a [(]resistance wire 15[)] is arranged in the washing fluid duct (8) [and/]or at the washing nozzles (12-14).

14. (twice amended) The shield cleaning system as claimed in claim 1, wherein, in a basic position, the washing nozzles (12-14, 38) are countersunk in a recess (5, 36) of an automobile component [(fender 1, body panel 33)] adjacent to the shield (2, 34).

16. (twice amended) The shield cleaning system as claimed in claim 1, wherein the washing arm (6, 37, 48, 53) is [produced from plastic by the] injection molded plastic [molding method].

17. (twice amended) The shield cleaning system as claimed in claim 13, wherein a guide (41) of the push rod (39) or a mounting of the washing arm is [produced] in one piece with a housing (44) of the automobile lights (35).

25. (twice amended) [The shield cleaning system as claimed in claim 1,] A shield cleaning system, operating solely by spraying with washing fluid, for shields of an automobile, comprising

a motor,

a washing arm component (60) movable over and at a distance from the shield by said motor, and a washing nozzle arranged on the washing arm component for spraying washing fluid onto the shield, wherein the washing nozzle has an outlet opening facing said shield in and defining all spraying positions of the nozzle and that of the washing arm component immediately during movement of the washing arm component from a basic position, and the washing nozzle is sprayable on at least portions of the shield immediately during all of said movement of the washing arm component, and wherein

the motor (61) for moving the washing arm [(6, 37, 48, 53,) component (60) is a motor (61) driven by the washing fluid.

27. (twice amended) The shield cleaning system as claimed in claim 1, with a washing fluid pump for conveying washing fluid to a front shield of the automobile, wherein the washing fluid pump (23) [is designed for] selectively [conveying] conveys washing fluid in two directions, the washing fluid being capable of being conveyed in one direction to the front shield and in the other direction to [the] other shields (2, 34, 65 [61]) of automobile lights (3, 4, 35[, 63])).

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